

### **REMARKS**

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 1 and 2 have been amended to incorporate the limitation of claim 4 requiring the catalyst to be a combination of zinc chloride and stannous chloride, and to replace the word "using" with the word --providing--. Claim 4 has been amended to remove the limitation now present in claims 1 and 2, and to depend from claims 1 and 2. Claims 3, 6, and 7 have been cancelled without prejudice.

New claim 8 has been added to the application, to more clearly describe the apparatus of the invention. Support is found in Figs. 3-4 and the specification at page 6, line 21 to page 10 last line.

The objection to claim 7 is rendered moot in view of the cancellation of the claim.

The patentability of the present invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

The rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,844,068 to Otera et al. is respectfully traversed.

Claim 1 has been amended to incorporate the limitation of claim 4 requiring the catalyst to be a combination of zinc chloride and stannous chloride. This combination is not taught by the cited reference. Therefore, Otera et al. do not anticipate the invention of claim 1, and this rejection should be withdrawn.

The rejection of claims 1, 3, 5 and 6 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,444,008 to Ichikawa et al. is respectfully traversed.

As discussed above, claim 1 has been amended to incorporate the limitation of claim 4 requiring the catalyst to be a combination of zinc chloride and stannous chloride. This combination is not taught by the cited reference. Therefore, Ichikawa et al. do not anticipate the invention of claim 1, or the invention of dependent claims 3 and 5, and this rejection should be withdrawn. [Claim 6 has been cancelled.]

The rejection of claims 6 and 7 under 35 U.S.C. § 102(b) as being anticipated by U.S.

Patent 5,108,711 to Chszaniecki is rendered moot by the cancellation of these claims.

The rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Ichikawa et al. in view of U.S. Patent 4,482,701 to Yamamori et al. is respectfully traversed.

Claim 2 has been amended to incorporate the limitation of claim 4 requiring the catalyst to be a combination of zinc chloride and stannous chloride. Amended claim 2 is not rendered obvious over Ichikawa et al. in view of Yamamori et al. for the reasons discussed below, in the arguments regarding the rejection of claim 4 over Ichikawa et al.

The rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Ichikawa et al. is respectfully traversed.

The Examiner takes the position that while the reference does not explicitly disclose a combination of both zinc chloride and stannous chloride in the claimed amounts as the reaction catalyst, use of a mixture of two catalysts when each one is explicitly listed as suitable for the same reactions would have been obvious, absent a showing of unexpected results that can be clearly attributed to the use of the mixed catalyst.

The combination of zinc chloride and stannous chloride as a catalyst does produce unexpected results. When zinc chloride and stannous chloride are used in combination, as in Applicants' claims, the polymerization time is shorter than when either catalyst is used alone. Additionally, when zinc chloride and stannous chloride are used in combination, the molecular weight of the formed polylactic acid is higher and the yield of polylactic acid is higher than when either catalyst is used alone. (See page 6, paragraphs [0016] and [0017], page 10, paragraph [0032] and page 11, paragraph [0035]).

As admitted by the Examiner, Ichikawa et al. do not explicitly teach the combination of zinc chloride and stannous chloride, as claimed by Applicants. Furthermore, Ichikawa et al. do not teach or suggest the unexpected results achieved by combining the two catalysts. There is no teaching or suggestion in Ichikawa et al. that a combination of catalysts would result in decreased polymerization time, increased molecular weight of polylactic acid or increased yield of polylactic acid.

Additionally, the disclosure of zinc chloride and stannous chloride in the reference are found in a long laundry list of possible catalysts. There is no guidance in the teachings of

Ichikawa et al. to choose Applicants' two catalysts from the expansive list of catalysts in the reference. Further, there is no teaching or suggestion in the reference that choosing zinc chloride and stannous chloride would result in the unexpected results discussed above.

For these reasons, the invention of claim 4 is clearly patentable over Ichikawa et al.

The comments set forth above concerning Ichikawa et al. are applicable claims 1, 2, 4 and 5 due to the incorporation of the combination of zinc chloride and stannous chloride as the catalyst into independent claims 1 and 2.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of objection and rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Takatsugu TAKAMURA et al.

By: Warren M. Cheek, Jr.  
Warren M. Cheek, Jr.  
Registration No. 33,367  
Attorney for Applicants

WMC/AEP/gtg  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
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